REMARKS/ARGUMENTS

1.) Claim Status

Claims 1-23 are pending in the application. The claims have not been amended. Favorable reconsideration of the application is respectfully requested in view of the following remarks.

2.) Allowable Subject Matter

The Examiner objected to claims 2-10, 12-15, and 17-22 as being dependent upon a rejected base claim but stated they would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The Applicants will delay any amendments until the Examiner has considered the following remarks.

3.) Claim Rejections – 35 U.S.C. § 102(e)

In paragraph 1 of the Office Action, the Examiner rejected claims 1, 11, 16, and 23 under 35 U.S.C. § 102(e) as being anticipated by Faccin, et al. (US 6,879,690). The Applicants respectfully disagree.

It is noted that Faccin neither discloses sessions established by users, nor suggests any problem or solution derived thereof. Additionally, Faccin relates to the authentication process, while the claimed invention addresses problems arising after authentication is complete.

Regarding claim 1, Faccin discloses an Authentication, Authorization, and Accounting (AAA) server in a packet data network (col. 4, l. 58-60) comprising: means for authenticating a user (col. 5, l. 14-15 and 44-48); and means for authorizing a service for the user when the user accesses the network (col. 5, l. 14-15, and col. 1, l. 31-36), as claim 1 recites.

However, Faccin fails to disclose an AAA server having means for generating a session identity, said session identity comprising a unique random value that is opaque, unpredictable, and not simultaneously re-usable, wherein the means for generating a

session identity includes means for structuring the session identity to include an identifier of the AAA server, said AAA server identifier being usable to route queries containing the AAA server identifier to the AAA server.

As noted above, Faccin neither discloses sessions established by users, nor suggests any problem or solution derived thereof. On the other hand, the claimed invention clearly relates to sessions created when a user is successfully authenticated by the system.

Furthermore, the claimed invention addresses the issue of enabling a client to find the AAA server hosting a given user after authentication is complete. To solve this issue the claimed invention provides for an AAA server having means for generating a structured session identifier that includes an identifier of the AAA server, said AAA server identifier being usable to route queries containing the AAA server identifier to the AAA server, as recited in claim 1 as presently on file. Thus, any further query involving a given session identity can unambiguously be routed to the AAA server holding a corresponding session.

The references made by the Examiner to Faccin's teaching do not teach or suggest the above distinguishing features of claim 1. For example, col. 5, lines 1-12 disclose secure channels with an AAA server in a domain as well as security associations for keys transmission. Col. 8, lines 46-59 disclose a generally know challenge-based authentication algorithm (Fig. 3) that includes the use of a random number and a long term key to produce the same signed response at both entities carrying out the authentication procedure (further details can be read in col. 10, lines 32-67). However, these passages do not have anything to do with a session identifier including an identifier of the AAA server, to be further used in determining which is the AAA server in charge of this session, and including a random, unique, not reusable, and unpredictable value.

Therefore, claim 1 as presently on file is novel and inventive over Faccin's teaching.

Regarding the claims 11 and 16, Faccin discloses a system and a method in a packet data network having a plurality of Authentication, Authorization, and Accounting (AAA) servers (col. 4, lines 57-60), however, Faccin does not teach or suggest anything

about routing queries to an appropriate AAA server. In the following, the discussion refers to the wording of the system claim 11 and is considered applicable to the method claim 16 as well, both claims having corresponding technical features.

In particular, Faccin discloses on col. 5, lines 1-25 secure channels with an AAA server in a domain, security associations for keys transmission, and the needs for a prior user authentication and user authorization before gaining IP connectivity to the visited domain. In col. 6, lines 12-22, Faccin discloses both AAA home server and mobile terminal sharing a common set of algorithms and a common set of keys (well-known features to those skilled in the art of challenge-response authentication procedures) these algorithms being applicable and usable for mutual authentication (authentication of the network by the user and vice verse). These technical features disclosed in Faccin's do not teach or suggest means for assigning a realm identifier to each of the plurality of AAA servers and means for creating a master session in a given AAA server, as recited in claim 11 for the purpose of routing queries to the appropriate AAA server. This is especially true because the master session is a session created when a user has been successfully authenticated by the system, and Faccin neither discloses sessions established by users, nor suggests any problem or solution derived thereof.

The Examiner also refers to Fig. 4 of Faccin, which illustrates a challenge-response authentication procedure. Col. 8, lines 40-59, describe the submission of the challenge from the user and the forwarding between an AAA-client to the AAA-server wherein a random number is generated and the algorithm executed to produce the challenged result to prove that the entity is the one which claims to be. That is, the citations made by the Examiner refer to features, algorithms, and a common set of keys related to the authentication procedure and which have nothing to do with the generation of a master session identifier (which occurs after authentication is complete).

In this respect, the forwarding between AAA–client and AAA-server of an authentication challenge as well as the generation of a random number to further execute an authentication algorithm to produce an authentication response can by no means be interpreted as anticipating the means within the given AAA server for generating a master session identity that includes a session reference and the realm

identifier assigned to the given AAA server, as recited in claim 11. Additionally, Faccin does not disclose master sessions simply because the master session is not created until having successfully completed the authentication procedure. Therefore, Faccin does not teach or suggest the claimed means within the network for routing queries based on the master session identity to the given AAA server.

Therefore, claims 11 and 16 as presently on file are novel and inventive over Faccin's teaching.

Regarding claim 23, Faccin discloses on col. 8, lines 51-59 an AAA server generating a random number "RANDTK" and executing the algorithm shared with the user equipment using a long term key "SA3" to compute a new pending temporary shared key. These and other resulting authentication data are forwarded towards the user equipment via an AAA client where similar results are produced to achieve a successful authentication.

As in the above rationale, the citations made by the Examiner refer to features, algorithms, and common set of keys related to the authentication procedure and which have nothing to do with the generation of a master session identifier (which occurs after authentication is complete). Thus, nothing in Faccin anticipates a method of routing queries to an appropriate AAA server, the method including the steps of randomly generating in each AAA server, a fixed-length realm identifier that uniquely identifies each generating AAA server; creating a master session in a given AAA server; generating by the given AAA server, a master session identity that includes a session reference and the realm identifier that identifies the given AAA server; and routing queries containing the master session identity through the network to the given AAA server.

In fact, as noted above, Faccin is silent about sessions created after the user has been successfully authenticated by the network and, consequently, nothing in Faccin can anticipate the problem of determining the AAA server in charge of a particular session for the user and even less the solution of including a realm identifier identifying said AAA server in the master session identity.

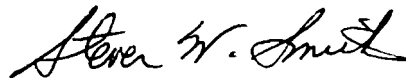Therefore, claim 23 as presently on file is novel and inventive over Faccin's teaching.

Therefore, the Applicants respectfully request the allowance of independent claims 1, 11, 16, and 23 and dependent claims 2-10, 12-15, and 17-22.

4.) Conclusion

In view of the foregoing remarks, the Applicants believe all of the claims currently pending in the Application to be in a condition for allowance. The Applicants, therefore, respectfully request that the Examiner withdraw all rejections and issue a Notice of Allowance for claims 1-23.

The Applicants request a telephonic interview if the Examiner has any questions or requires any additional information that would further or expedite the prosecution of the Application.

Respectfully submitted,

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Steven W. Smith
Registration No. 36,684

Ericsson Inc.
6300 Legacy Drive, M/S EVR 1-C-11
Plano, Texas 75024

(972) 583-1572
steve.xl.smith@ericsson.com